OBJECTIVES: This study examined resource utilization and direct, indirect, and procedure-related costs associated with photocoagulation and vitrectomy procedures among employees with diabetic retinopathy (DR). **METHODS:** Health care utilization and costs of DR employees age 18–64 were examined using claims from 17 large self-insured U.S. employers (1999–2004). Indirect costs (work loss, absenteeism) were estimated using disability claims and absenteeism information. The study sample included employees who had at least one diagnosis of DR based on ICD-9 codes and were enrolled continuously for 12 months. Cost outcomes were examined over a randomly chosen 12-month (study) period following the DR diagnosis. Annual total (i.e., health care plus indirect) costs (2005 USD) were compared between DR employees who did and did not undergo a procedure. Utilization and costs were measured on the procedure date and during the 30-day follow-up period. **RESULTS:** The study sample consisted of 2,098 DR employees. The average age was 51 years; 67.4% were male and 64.7% had type I diabetes. Approximately 11.8% (n = 247) of DR employees received photocoagulation procedures during the study period; 2.1% (n = 44) received vitrectomies. DR employees with photocoagulations had average total costs that were approximately double those of other DR employees ($34,539 vs. $16,041, $p < 0.001$); employees with vitrectomies had costs that were over 3.5 times higher than non-vitrectomy DR employees ($63,933 vs. $17,239, $p < 0.001$). Indirect costs accounted for about 10% of these differences. More than half (58.7%) of employees had multiple photocoagulations within the study period and the majority of employees with vitrectomies received multiple procedures on the same day. Most (76%) photocoagulations were performed in physicians' offices; nearly all (96%) vitrectomies were performed in an outpatient or ambulatory surgery setting. **CONCLUSION:** Photocoagulation and vitrectomy procedures were associated with substantially higher costs among DR employees. Indirect costs were a substantial but not dominant driver of cost differences.

PDB10

A PHARMACOECONOMIC EVALUATION FOR THE TREATMENT OF MEXICAN PATIENTS WITH DIABETES TYPE 2

Contreras-Hernandez I[1], Mould-Quevedo J[2], Salinas-Escudero G[1], Pacheco-Dominguez RL[3], Castro-Martínez G[4], Davila-Loaiza G[2], Garduño-Espinosa J[1]

[1]Social Security Mexican Institute, Mexico City, Mexico, [2]Pfizer Mexico, Mexico City, Mexico, [3]Social Security Mexican Institute, Mexico City, Federal District, Mexico, [4]Social Security Mexican Institute, Mexico City, Mexico, Federal District, Mexico

OBJECTIVES: Diabetes mellitus type 2 (DM2) is a high prevalence disease in Mexico which represented expenditures in the Mexican Health System above US$450 millions. The purpose of this study was to compare the cost–effectiveness ratios between multiple pharmacologic treatments for adult patients with DM2 who didn't reach metabolic control (HbAC1 < 7%) using oral hypoglycemic agents or diet from the Mexican health care payer's perspective. **METHODS:** We used a ten-year Markov analysis model to estimate costs and effectiveness. Markov model includes several DM2 complications stages (retinopathy, cardiovascular diseases, neuropathy, nephropathy and death). Effectiveness measure was the number of life years gained (LYG). Transition probabilities were obtained from international published literature (UKPDS studies). Comparators were: NPH insulin, glargine insulin, inhalable insulin, NPH insulin + metformin and pioglitazone + metformin. Resource use estimations were performed employing hospital records in second and third health care level hospitals from the Social Security Mexican Institute in Mexico City (n = 311). Costs included emergency, outpatient and inpatient services, drugs, comorbidities procedures, etc. Costs and LYG were discounted 5% annually. One-way and probabilistic sensitivity analyses were performed and acceptability curves were constructed. **RESULTS:** Expected costs for patients using inhalable insulin resulted in US$17,997, followed by NPH insulin (US$19,433), glargine insulin (US$20,338), NPH insulin + metformin (US$19,642) and pioglitazone + metformin (US$25,258). LYG per patient resulted in 8.13 yrs with inhalable insulin vs. 8.05 yrs with the other therapies in average. ICERs for inhalable insulin against other therapies resulted within the range US$2213–US$3141. Results were robust to Monte Carlo first order sensitivity analysis and acceptability curves showed that inhalable insulin was the option most cost-effective with a 69.9% of certainty. **CONCLUSION:** Despite its higher cost in the Mexican market, inhalable insulin was in the long term the most cost—effective option for the treatment of DM2 patients who didn't reach metabolic control.

PDB11

THE COST-EFFECTIVENESS OF VACUUM ASSISTED CLOSURE® (V.A.C.) THERAPY FOR THE TREATMENT OF DIABETIC FOOT WOUNDS

Flack SM[1], Apelqvist J[2], Trueman P[1], Keith MS[3], Williams DV[4]

[1]York Health Economics Consortium, York, UK, [2]University Hospital of Malmö, Malmö, Sweden, [3]KCI USA, Inc, San Antonio, TX, USA, [4]Milliman, Windsor, CT, USA

OBJECTIVES: To determine the cost-effectiveness of V.A.C. Therapy compared to advanced wound dressings (Dermagraft and Apligraf), for diabetic foot ulcer patients treated in the U.S. **METHODS:** A Markov model was designed to estimate the cost per amputation avoided and the cost per quality-adjusted life year (QALY) of V.A.C. Therapy compared to advanced dressings. Over a one-year period, the Markov model simulated 1000 patients using transition probabilities obtained from the literature. The health states used in the model were uninfected ulcer, infected ulcer, infected ulcer post-amputation, healed, healed post-amputation, amputation, and death. Unhealed V.A.C. treated patients were switched to the advanced dressing after three months of treatment while unhealed advanced dressing treated patients continued on their advanced dressing for any remaining months. **RESULTS:** The model results demonstrate that V.A.C. Therapy dominates the advanced dressing comparator. Over one-year, V.A.C. will result in more QALYs gained (0.54 versus 0.53 per person), less amputations (0.0011 versus 0.0012, per person) and a higher percentage of healed wounds (61% vs. 59%) and 0.68 more ulcer free months (5.79 vs. 5.11) at an overall lower cost of care ($52,830 vs. $61,757; per person). **CONCLUSION:** The model results indicate that V.A.C. Therapy is less costly and more effective than the advanced dressing comparator. The results are robust to changes of key parameters, including the comparator (traditional versus advanced), transition probabilities, cost of V.A.C., and the utility weights. Extending the model for a longer period (three years) resulted in even greater cost savings in the V.A.C. arm (e.g., the incremental cost would be –$10,101 and the incremental QALY would be 0.009, per person, using a 3.5% discount rate for costs and benefits).